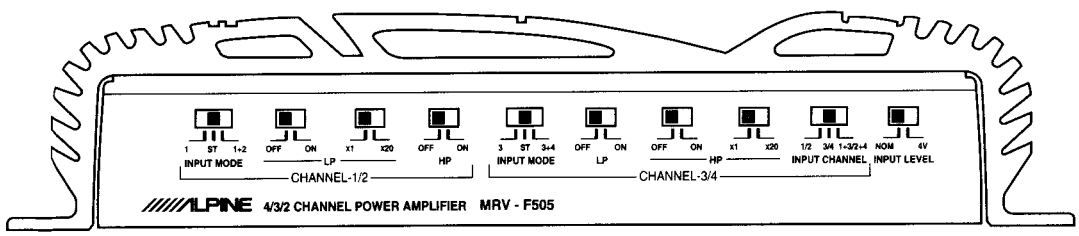
ALPINE®

SERVICE MANUAL

4/3/2 Channel Power Amplifier



サービス費用区分	B
技術資料No.	PM-67-O

MRV-F505

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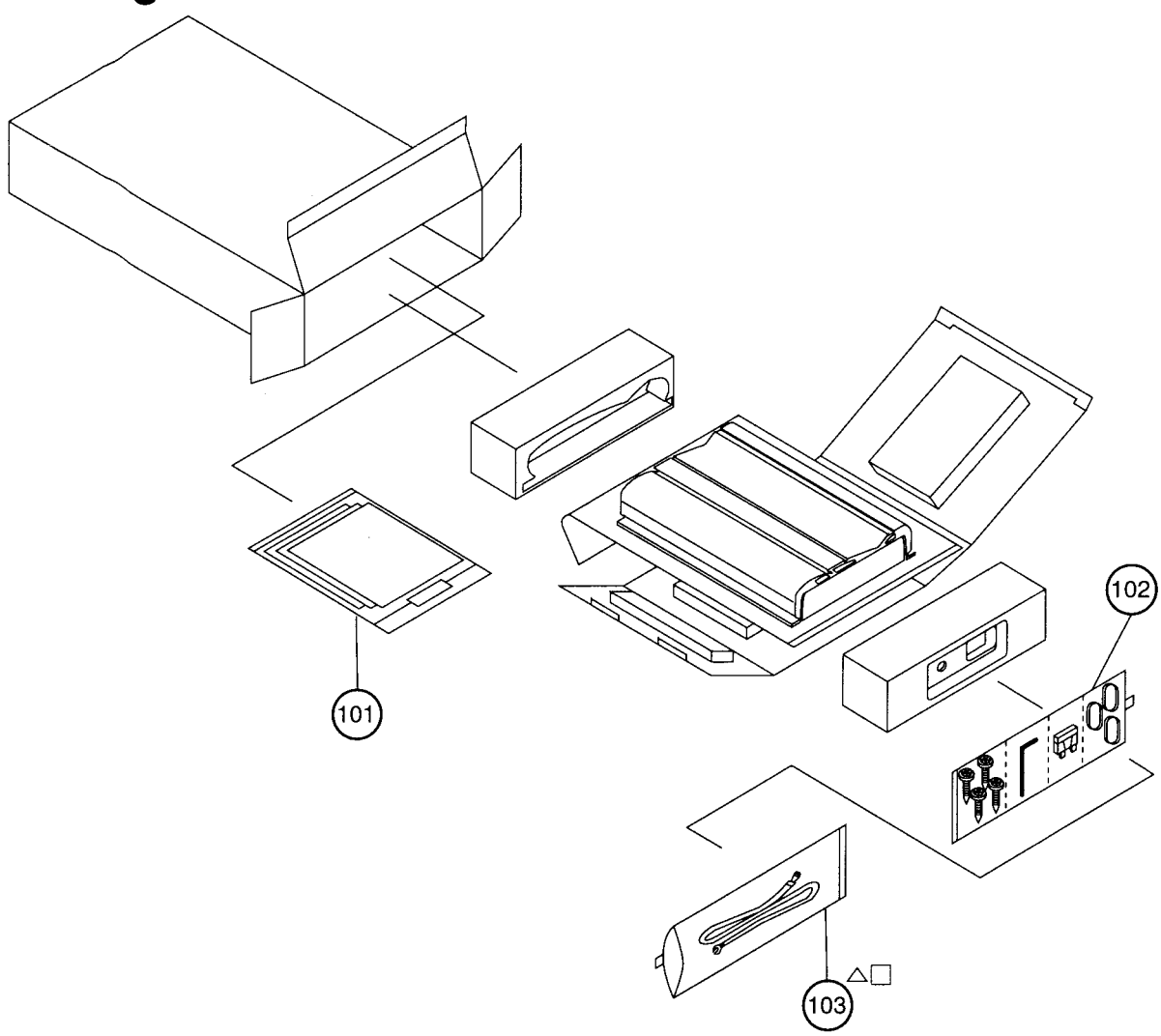
Packing Assembly Parts List

Symbol No.		Part No.	Description
○	101-1	68P90664W55	Owner's Manual
△	101-1	68P90664W92	Owner's Manual
□	101-1	68P90664W57	Owner's Manual
△	101-2	68P90664W56	Owner's Manual (I/G/S)
	102-1	15A81064F01	Housing Rubber
	102-2	15A81064F03	Housing Rubber
	102-3	75E10203S01	Housing Rubber (B)
	102-4	65E25833S01	Fuse, Auto 25A (For Battery Line)
□	103-1	01E22738S01	Assy., Speaker Wire
△	103-2	01E21979S01	Assy., Power Wire

Symbol No.		Part No.	Description
□	103-2	01E21979S01	Assy., Power Wire
△	103-3	28E21976S01	Remote Cord
□	103-3	28E21976S01	Remote Cord

NOTE : ○: For MRV-F505 (North American) Model Only, △: For MRV-F505 (General Foreign) Model Only,
□: For MRV-F505 (Japanese) Model Only, Others : Common.

Packing Method View



NOTE: ○ : For MRV-F505 (North American) Model Only, △ : For MRV-F505 (General Foreign) Model Only,
□ : For MRV-F505 (Japanese) Model Only, Others : Common.

Specifications

Power Output (20Hz～20Hz)	4ohm-4channel, 0.2% T.H.D. : 80W
	2ohm-4channel, 1% T.H.D. : 110W
	4ohm-2channel, 1% T.H.D., BTL : 200W
S/N Ratio (80W/ch/4ohm, Input shorted)	100dB
Input Sensitivity	SP., 80W/ch Output, CW : 0.2V±3dB
	Center : 1V±3dB
	CCW : 4V±3dB
	Input Level SW 4V, 80W/ch : 4V±3dB
	PRE., 1V Output, Center : 1V+1, -3dB
Input Impedance	27±6k ohm
Ferquency Response (-1dB at 1kHz)	20Hz～40kHz
Current Drain	4ohm-4channel, 10% T.H.D. : 57A
	2ohm-4channel, 10% T.H.D. : 93A
Channel Separation (Input Shorted, at 1kHz)	55dB
Residual Noise (Input Shorted)	Weighted : 0.18mV
	Unweighted : 3mV
Fuse Requirement	25A×2 (For Battery Line)
Power Source	DC14.4V (11～16V)
Semiconductors	15IC's, 60Transistors, 29Diodes, 14Zener Diodes, 20FET's
Dimensions (W×H×D)	240×53×400mm
Weight	4.5kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

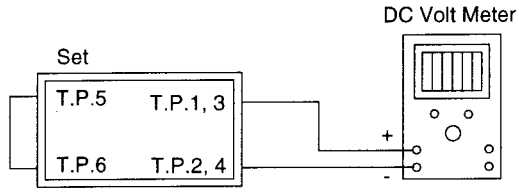
Adjustment Procedures

1. Power Supply Voltage Adjustment

2次電源電圧調整

(1) Connection

接続



BATTERY, REMOTE : DC14.4V
No Signal Input

Figure 1
1図

(2) Adjustment Procedures

調整方法

① First, rotate VR501, 502 fully counter clokwise.
調整を始める前に VR501, 502を反時計方向一杯に回転させる。

② 1ch/2ch Agjustment : Adjust VR501 so that Voltage between T.P.1 and T.P.2 reaches 63.5～64.5V.
T.P.1とT.P.2との間の電圧が63.5～64.5Vの間になる様にVR501で調整する。

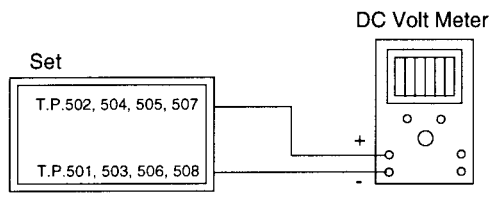
③ 3ch/4ch Agjustment : Adjust VR502 so that Voltage between T.P.3 and T.P.4 reaches 63.5～64.5V.
T.P.3とT.P.4との間の電圧が63.5～64.52Vの間になる様にVR502で調整する。

2. Idling Adjustment

アイドリング電流調整

(1) Connection

接続



BATTERY, REMOTE : DC14.4V
No Signal Input

Figure 2
2図

(2) Adjustment Procedures

調整方法

① First, rotate VR104, 204, 304, 404 fully counter clokwise.
調整を始める前に VR104、204、304、404を反時計方向一杯に回転させる。

② 1ch Agjustment : Adjust VR104 so that Voltage between T.P.502 and T.P.501 reaches 4.5～5.5mV.
T.P.502とT.P.501との間の電圧が4.5～5.5mVの間になる様にVR104で調整する。

③ 2ch Agjustment : Adjust VR204 so that Voltage between T.P.504 and T.P.503 reaches 4.5～5.5mV.
T.P.504とT.P.503との間の電圧が4.5～5.5mVの間になる様にVR204で調整する。

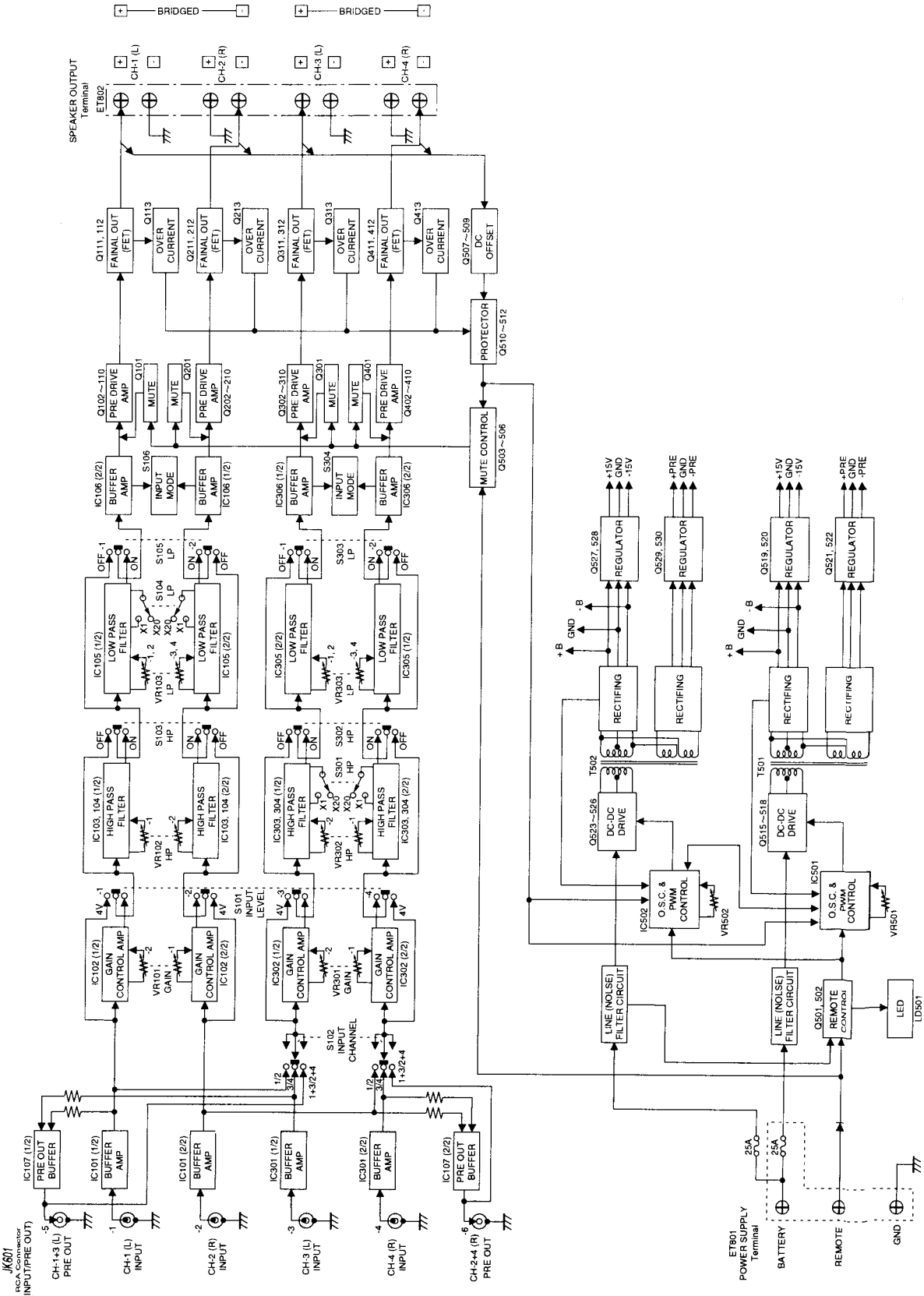
④ 3ch Agjustment : Adjust VR304 so that Voltage between T.P.505 and T.P.506 reaches 4.5～5.5mV.
T.P.505とT.P.506との間の電圧が4.5～5.5mVの間になる様にVR304で調整する。

⑤ 4ch Agjustment : Adjust VR404 so that Voltage between T.P.507 and T.P.508 reaches 4.5～5.5mV.
T.P.507とT.P.508との間の電圧が4.5～5.5mVの間になる様にVR404で調整する。

NOTE : For the Adjustment Parts (VR104, 204, 304, 404, 501, 502) and Test Points (T.P.1~6, 501~508), refer to the Parts Layout on P.C. Boards and Wiring Diagram.

注記 : 調整部品（VR104, 204, 304, 404, 501, 502）及びテストポイント（T.P.1~6, 501~508）の詳細についてに、「Parts Layout on P.C. Boards and Wiring Diagram」を参照願います。

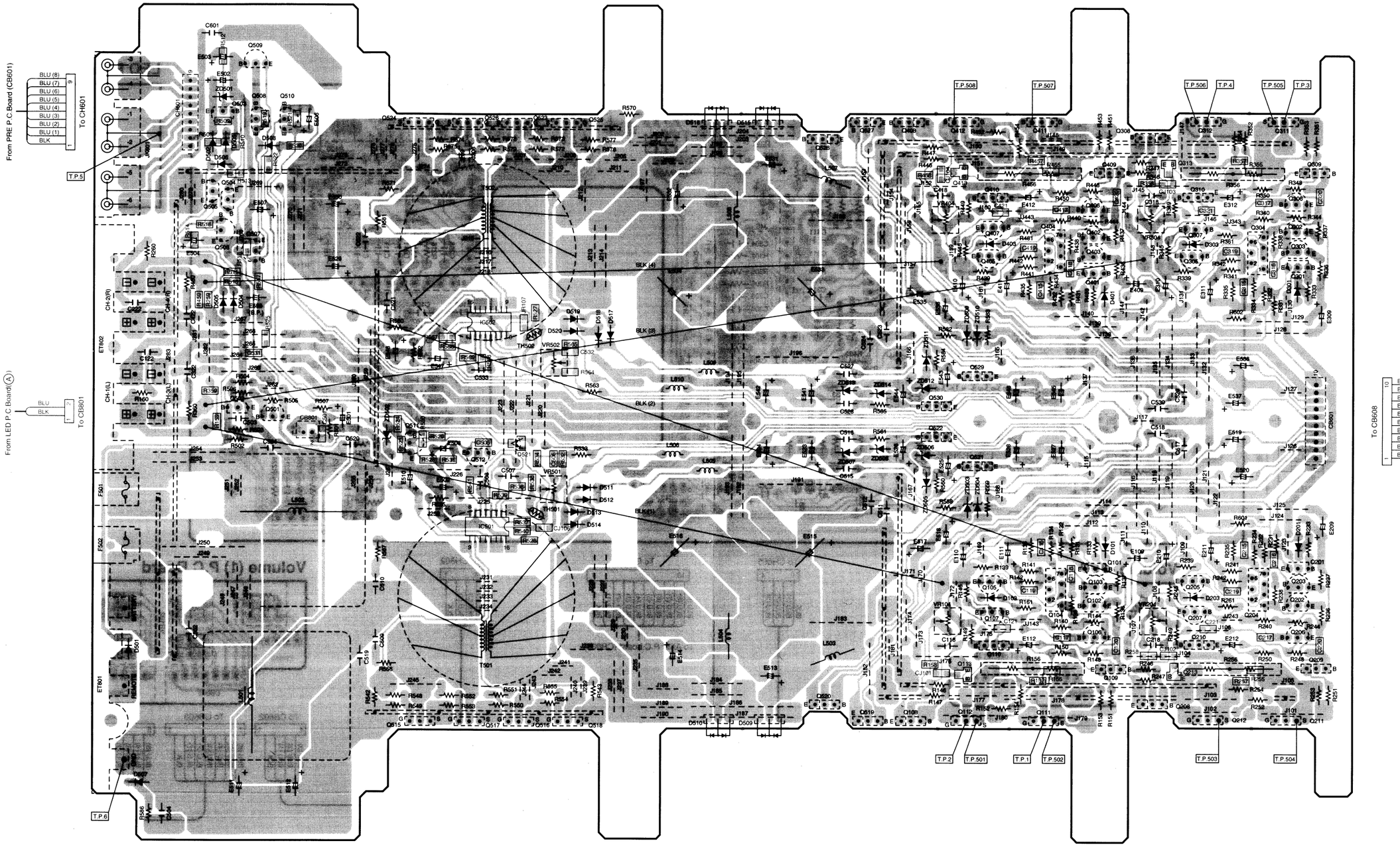
Block Diagram



Parts Layout on P.C. Boards and Wiring Diagram (1/2)

All P.C. Boards viewed from soldered side.

AMP P.C.Board

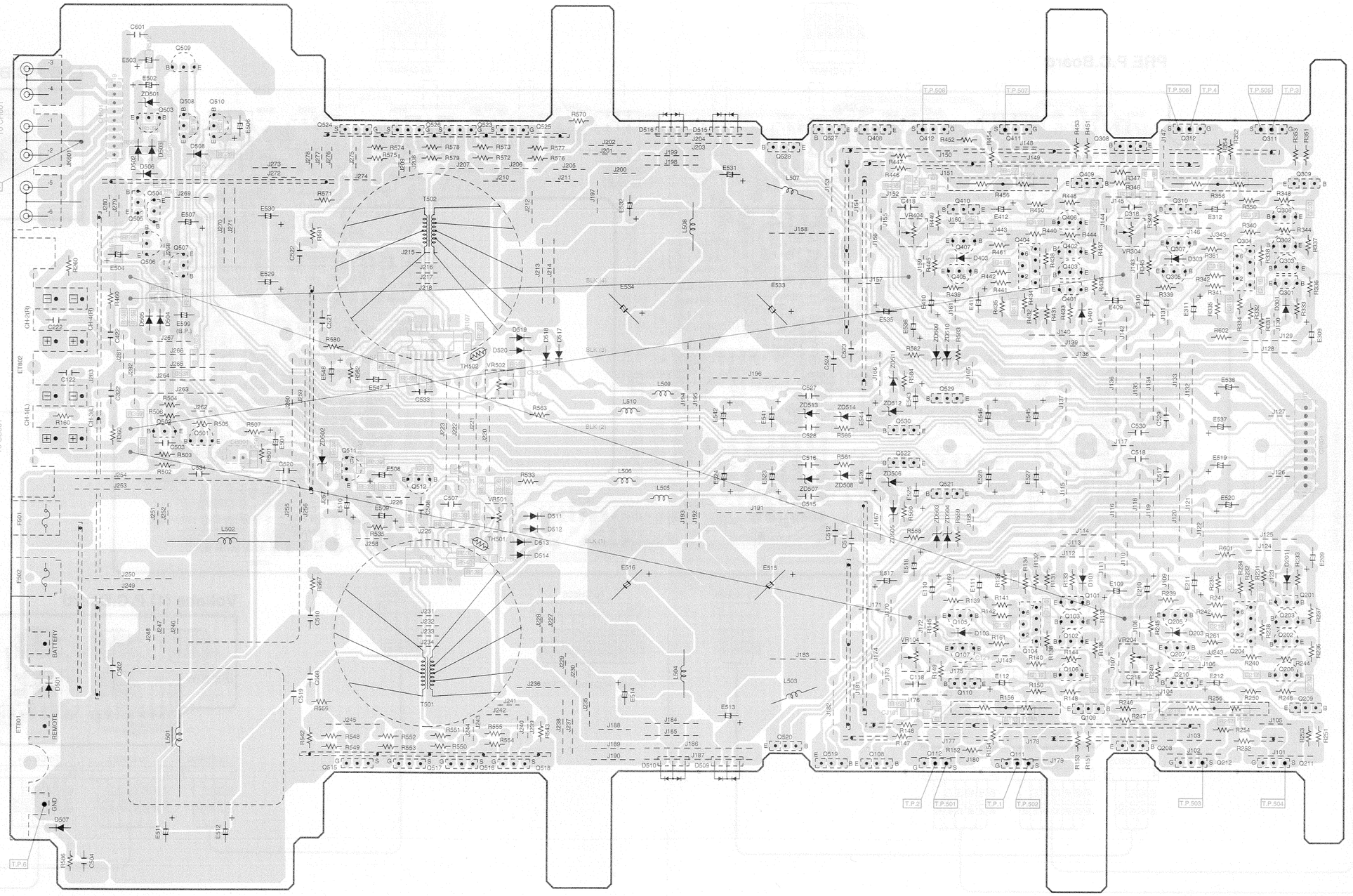


Blue Color Pattern : Foil Side Pattern

Parts Layout on P.C. Boards and Wiring Diagram (1/2)

All P.C. Boards viewed from soldered side.

AMP P.C.Board



Blue Color Pattern : Foil Side Pattern

Parts Layout on P.C. Boards and Wiring Diagram (2/2)

All P.C. Boards viewed from soldered side.

1

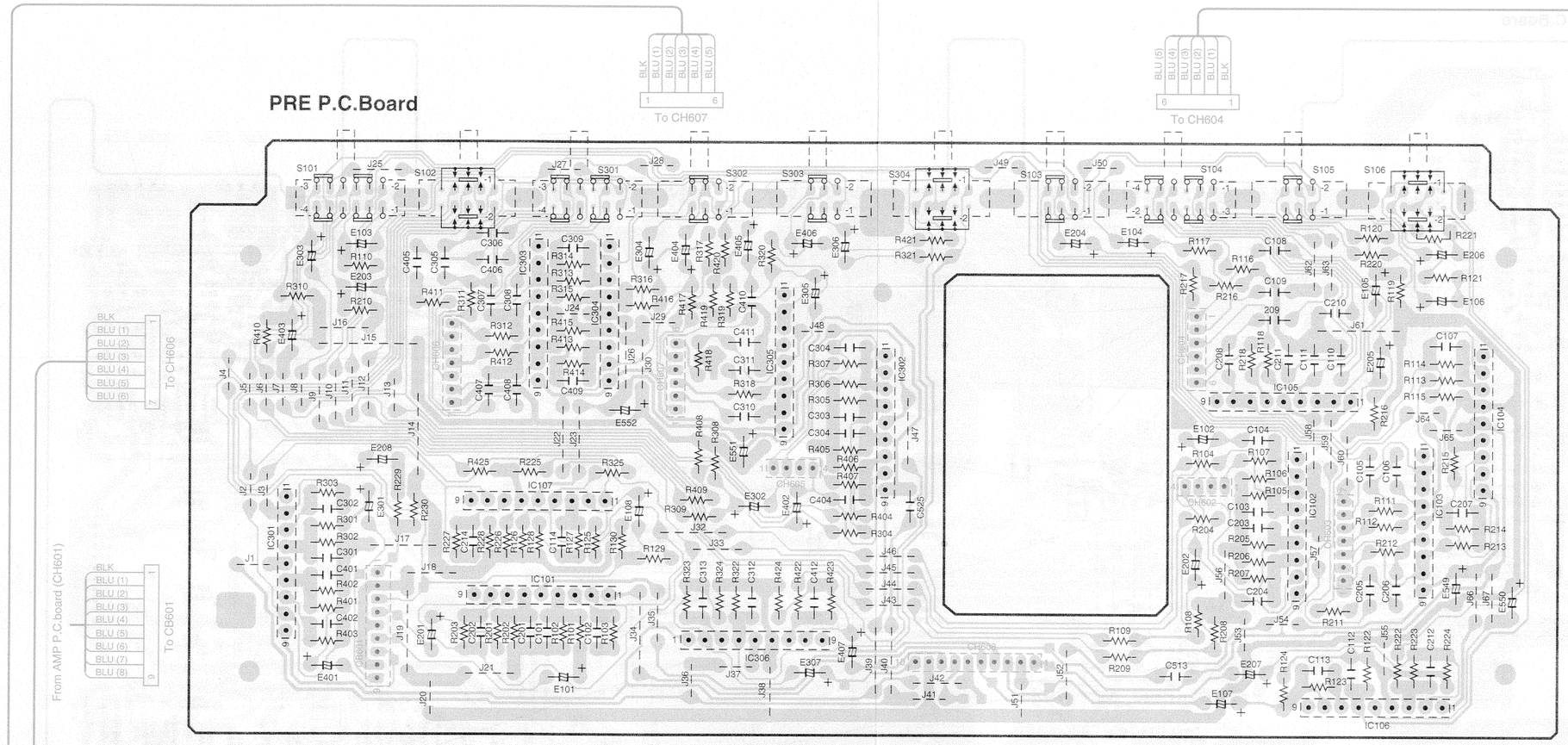
2

3

4

5

PRE P.C.Board



Parts Layout on P.C. Boards and Wiring Diagram (2/2)

All P.C. Boards viewed from soldered side.

1

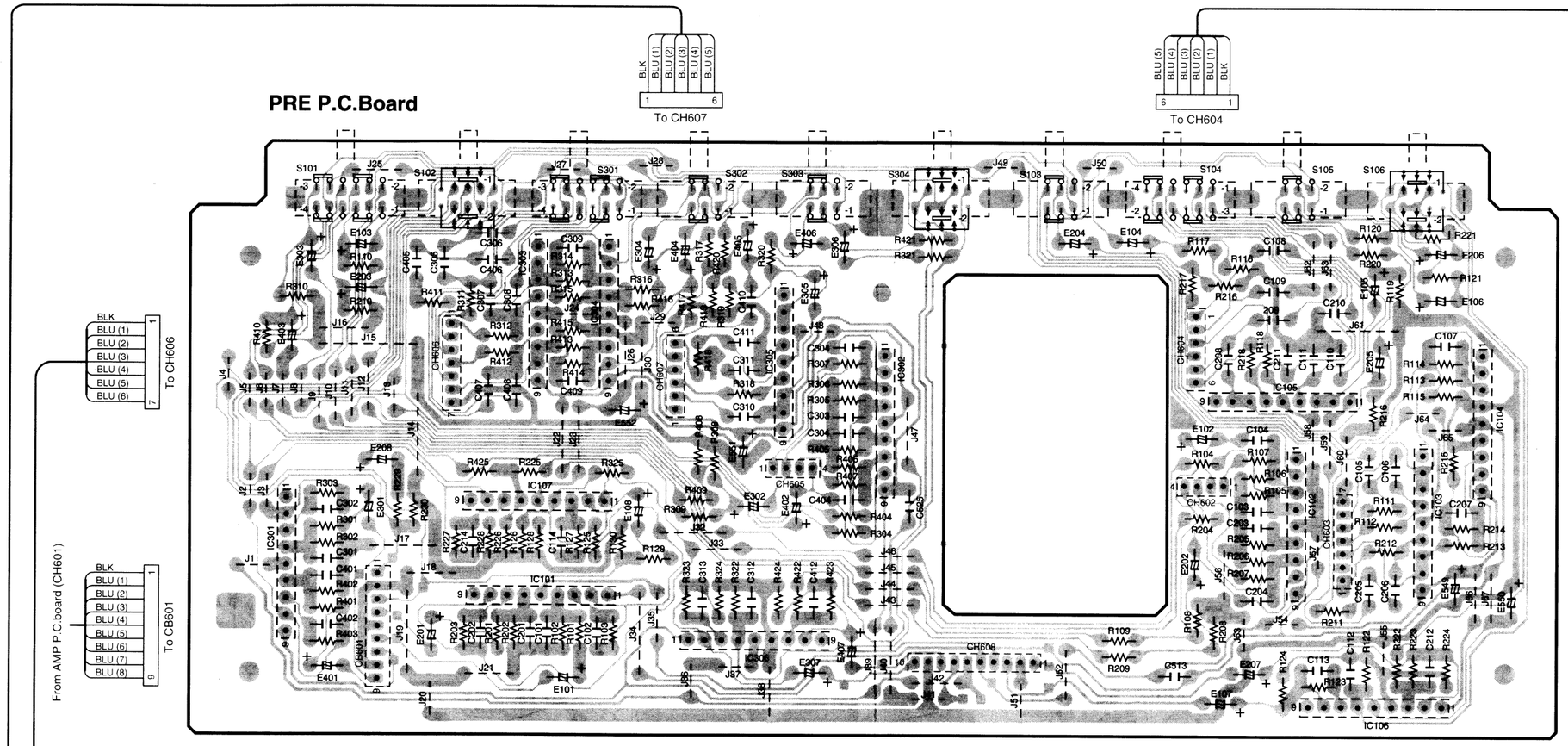
2

3

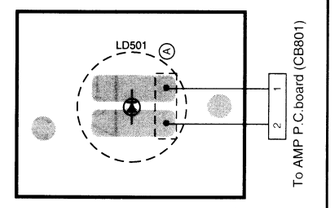
4

5

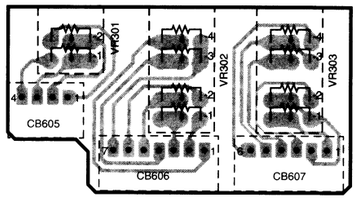
PRE P.C.Board

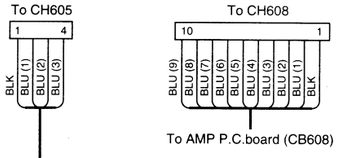


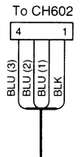
LED P.C.Board



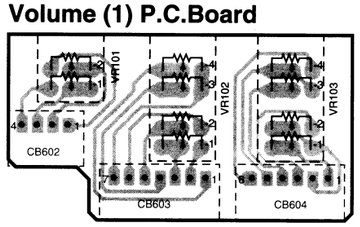
Volume (2) P.C.Board

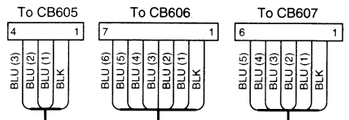


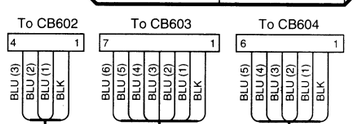




Volume (1) P.C.Board



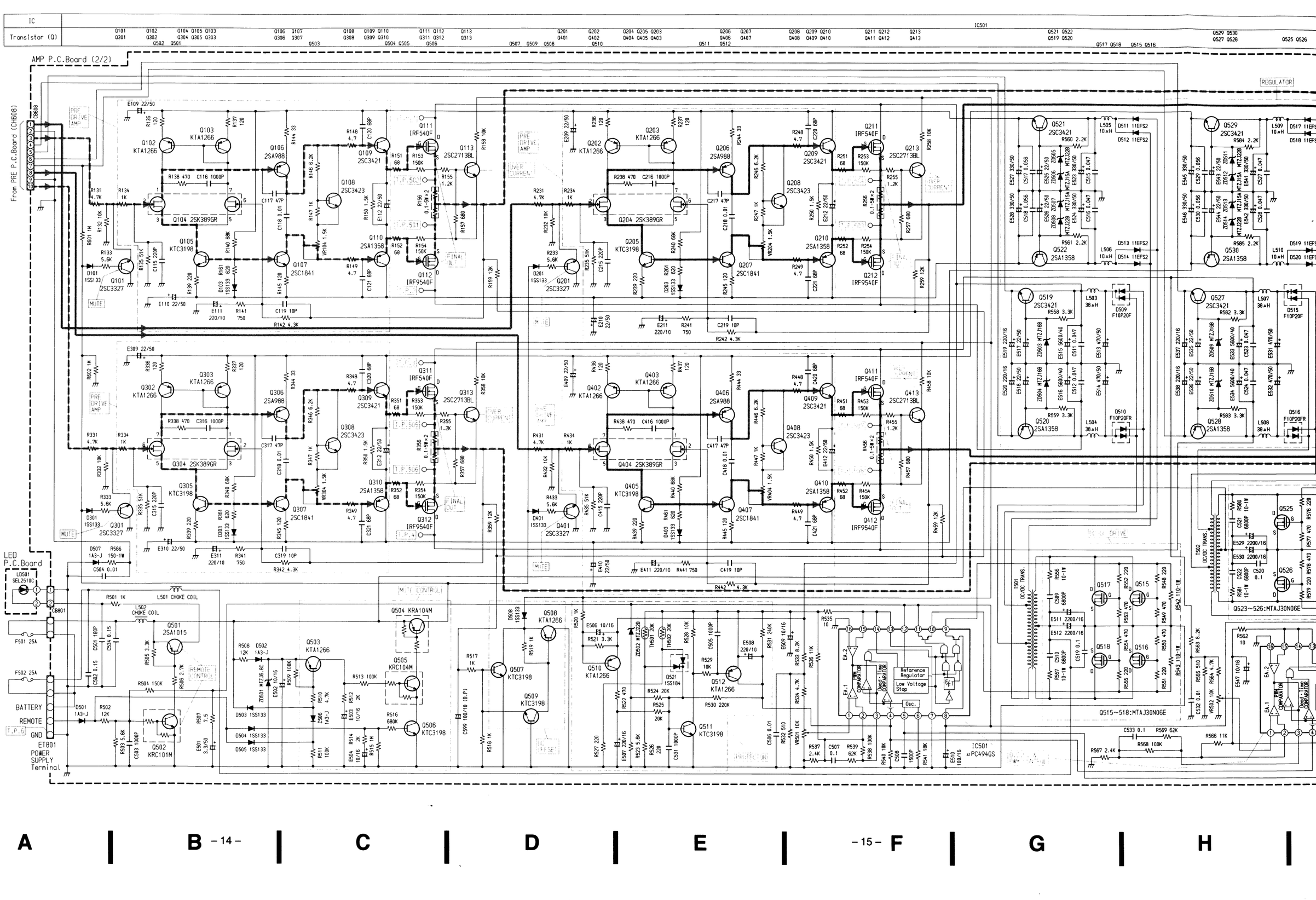


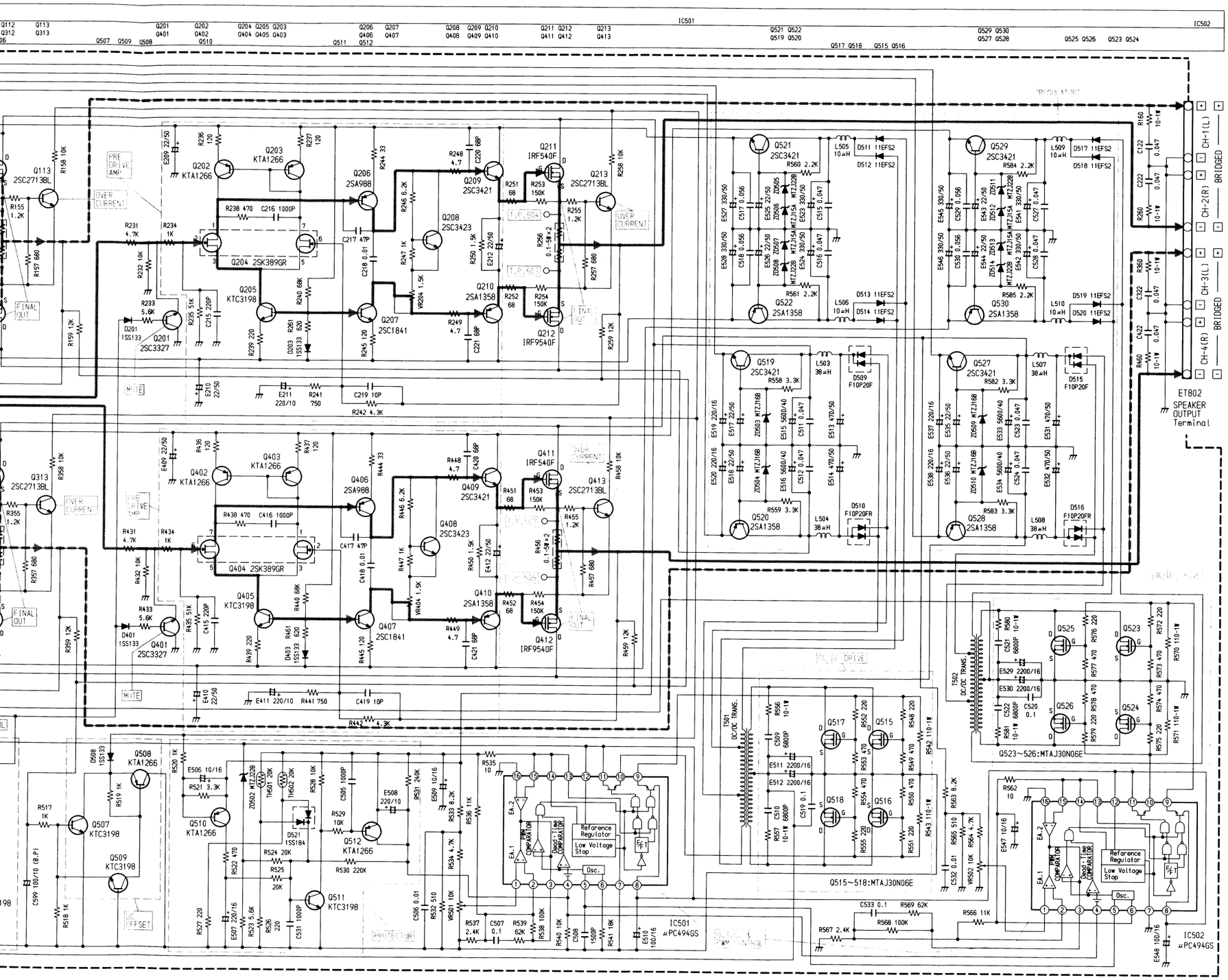


Blue Color Pattern : Foil Side Pattern

MRV-F505 MRV-F505

Schematic Diagram (2/2)





IC501, 502

1	0.95V/ 0V	PROTECT OFF/ ON	9	0.6V/ 0V	PROTECT OFF/ ON
2	0.95V/ 0.83V	PROTECT OFF/ ON	10	0.7V/ 0V	PROTECT OFF/ ON
3	3.76V/ 0V	PROTECT OFF/ ON	11	14.2V	
4	0.2V/ 4.68V	PROTECT OFF/ ON	12	14.2V	
5	1.7V		13	5V	
6	3.67V		14	5V	
7	0V		15	5V	
8	14.3V		16	0V	

Q104, 204, 304, 404

1	34.1V	5	0.5V
2	0V	6	0V
3	0.5V	7	34.1V
4	NC		

	E	C	B	MODE		E	C	B	MODE
Q101	0V/ 0V	0V/ 0V	0V/ 0.6V	PROTECT OFF/ ON	Q301	0V/ 0V	0V/ 0V	0V/ 0.6V	PROTECT OFF/ ON
Q102	34.2V	33.5V	33.6V		Q302	34.2V	33.5V	33.6V	
Q103	34.2V	33.6V	33.6V		Q303	34.2V	33.6V	33.6V	
Q105	-34.1V	0.5V	-33.4V		Q305	-34.1V	0.5V	-33.4V	
Q106	34.6V	3.64V	34.2V		Q306	34.6V	3.64V	34.2V	
Q107	-34V	-3.9V	-33.4V		Q307	-34V	-3.9V	-33.4V	
Q108	-1.2V	3.64V	-0.45V		Q308	-1.2V	3.64V	-0.45V	
Q109	3.4V	34.7V	3.63V		Q309	3.4V	34.7V	3.63V	
Q110	-3.5V	-34.6V	-3.9V		Q310	-3.5V	-34.6V	-3.9V	
Q113	0V/0V	32V/8mV	0V/0.6V	PROTECT OFF/ ON	Q313	0V/0V	32V/8mV	0V/0.6V	PROTECT OFF/ ON
Q201	0V/ 0V	0V/ 0V	0V/ 0.6V	PROTECT OFF/ ON	Q401	0V/ 0V	0V/ 0V	0V/ 0.6V	PROTECT OFF/ ON
Q202	34.2V	33.5V	33.6V		Q402	34.2V	33.5V	33.6V	
Q203	34.2V	33.6V	33.6V		Q403	34.2V	33.6V	33.6V	
Q205	-34.1V	0.5V	-33.4V		Q405	-34.1V	0.5V	-33.4V	
Q206	34.6V	3.64V	34.2V		Q406	34.6V	3.64V	34.2V	
Q207	-34V	-3.9V	-33.4V		Q407	-34V	-3.9V	-33.4V	
Q208	-1.2V	3.64V	-0.45V		Q408	-1.2V	3.64V	-0.45V	
Q209	3.4V	34.7V	3.63V		Q409	3.4V	34.7V	3.63V	
Q210	-3.5V	-34.6V	-3.9V		Q410	-3.5V	-34.6V	-3.9V	
Q213	0V/0V	32V/8mV	0V/0.6V	PROTECT OFF/ ON	Q413	0V/0V	32V/8mV	0V/0.6V	PROTECT OFF/ ON

	E	C	B	MODE
Q501	14.4V	14.1V	13.5V	
Q502	0V	0.04V	3.8V	PROTECT ON
Q503	6.75V/ 6.74V	0V/ 6.73V	6.68V/ 6.14V	PROTECT OFF/ ON
Q504	14.4V/ 14.4V	-7.5V/ 14.38V	14.25V/ 0.14V	PROTECT OFF/ ON
Q505	0V/ 0.06V	14.25V/ 0.12V	0V/ 2.5V	PROTECT OFF/ ON
Q506	0V	5.2mV	0.56V	
Q507	0V/ 0V	31.4V/ 3.8V	0V/ 0.6V	PROTECT OFF/ ON
Q508	31.4V/ 3.8V	0V/ 0V	31.4V/ 3.5V	PROTECT OFF/ ON
Q509	0V/ -0.6V	31.4V/ 0.1V	0V/ 0V	PROTECT OFF/ ON
Q510	32V/ 32V	0V/ 31.7V	32V/ 31.7V	PROTECT OFF/ ON
Q511	0V/ 0V	5V/ 20mV	3mV/ 0.65V	PROTECT OFF/ ON
Q512	5V/ 5V	0.2V/ 4.9V	5V/ 4.3V	PROTECT OFF/ ON
Q519	15.3V	32V	15.9V	
Q520	-15.3V	-32V	-15.9V	
Q521	34.7V	36.8V	35.3V	
Q522	-34.6V	-36.8V	-35.2V	
Q527	15.3V	32V	15.9V	
Q528	-15.3V	-32V	-15.9V	
Q529	34.7V	36.8V	35.3V	
Q530	-34.6V	-36.8V	-35.2V	

	S	D	G		S	D	G
Q111	0V	32V	3.4V	Q515	0V	14.4V	0.38V
Q112	0V	-32V	-3.5V	Q516	0V	14.4V	0.38V
Q211	0V	32V	3.4V	Q517	0V	14.4V	0.38V
Q212	0V	-32V	-3.5V	Q518	0V	14.4V	0.38V
Q311	0V	32V	3.4V	Q523	0V	14.4V	0.38V
Q312	0V	-32V	-3.5V	Q524	0V	14.4V	0.38V
Q411	0V	32V	3.4V	Q525	0V	14.4V	0.38V
Q412	0V	-32V	-3.5V	Q526	0V	14.4V	0.38V

[Measuring Conditions]

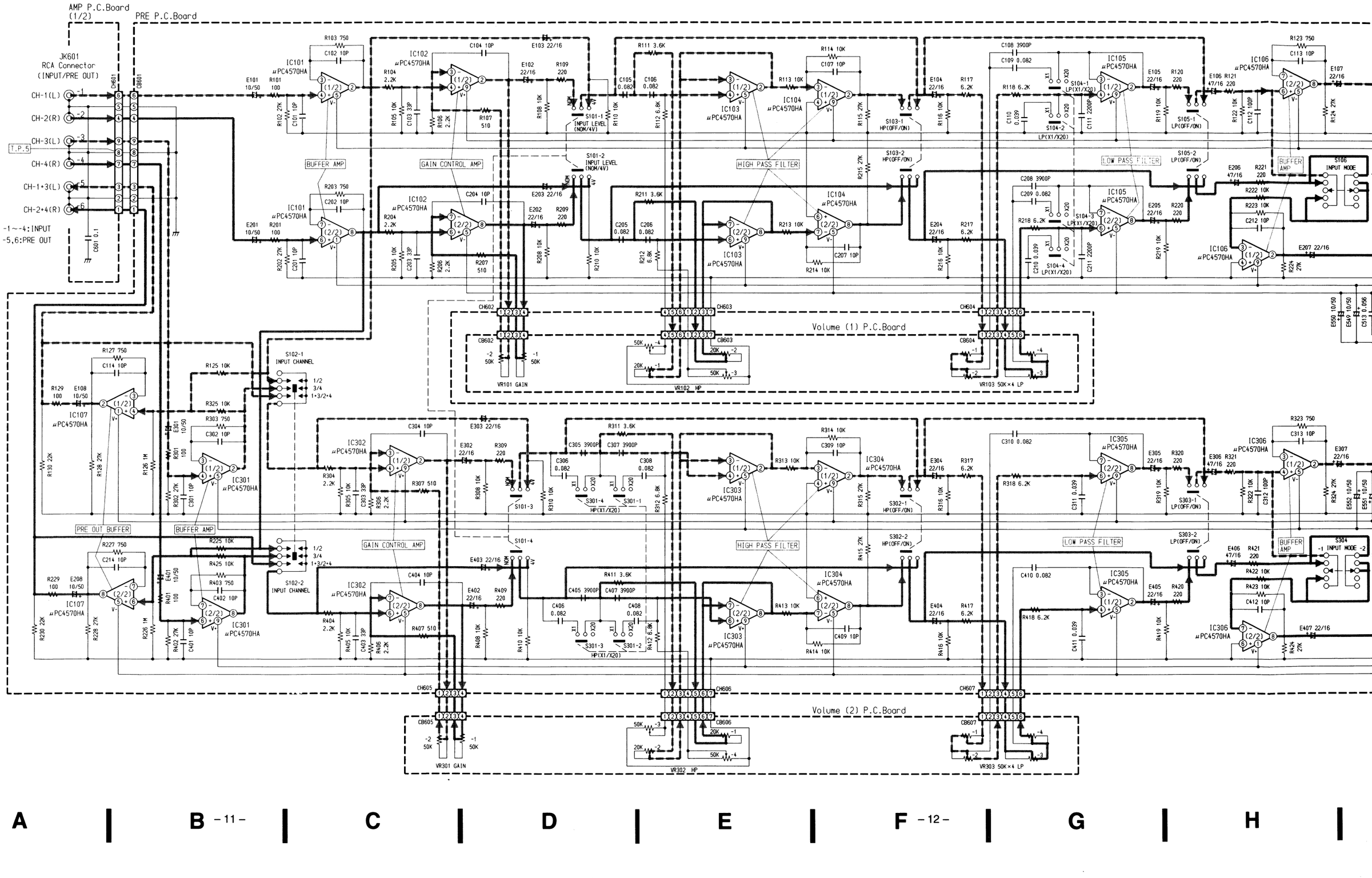
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTE:

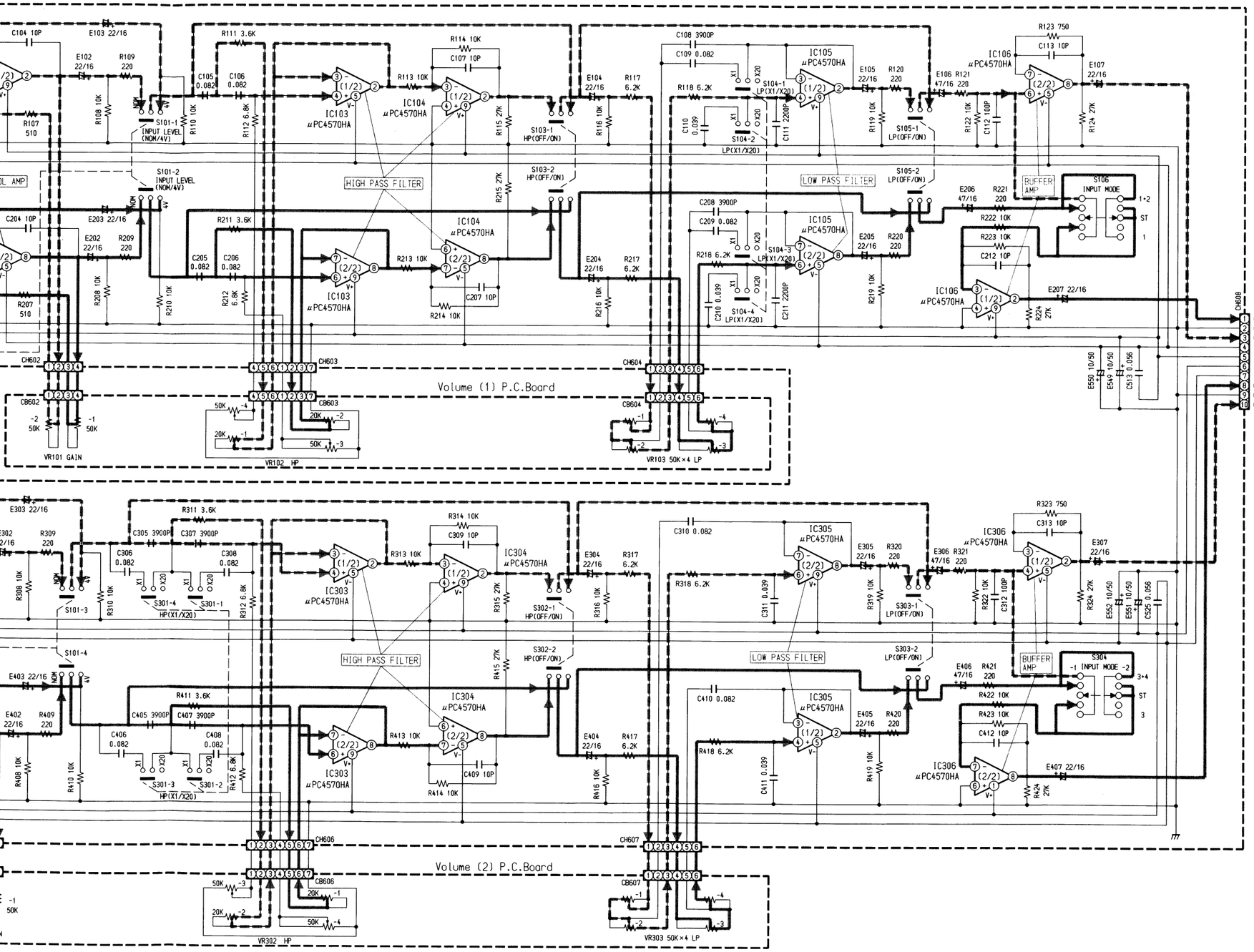
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Schematic Diagram (1/2)

IC	IC107	IC301	IC101	IC302	IC102	IC303	IC103	IC304	IC104	IC305	IC105	IC306	IC106



IC103 IC104 IC105 IC106
IC303 IC304 IC305 IC306



IC101, 102, 103, 104, 105, 106, 107,
301, 302, 303, 304, 305, 306

1	15.3V	6	0V
2	0V	7	0V
3	0V	8	0V
4	0V	9	15.3V
5	-15.3V		

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input

NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1{,}000{,}000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

Symbol No.	Part No.	Description
AMP P.C.Board		
IC's		
IC501	51E25816S01	μPC494GS
IC502	51E25816S01	μPC494GS
Transistors / FET's		
Q101	48E25625S01	2SC3327
Q102	48E25656S01	KTA1266
Q103	48E25656S01	KTA1266
Q104	48E23418S01	FET, 2SK389GR
Q105	48E25657S01	KTC3198
Q106	48E25660S01	2SA988
Q107	48E25659S01	2SC1841
Q108	48E23414S01	2SC3423
Q109	48E04071S01	2SC3421
Q110	48E04070S01	2SA1358
Q111	48E25835S01	FET, IRF540F
Q112	48E25834S01	FET, IRF9540F
Q113	48E25696S01	CP., 2SC2713BL
Q201	48E25625S01	2SC3327
Q202	48E25656S01	KTA1266
Q203	48E25656S01	KTA1266
Q204	48E23418S01	FET, 2SK389GR
Q205	48E25657S01	KTC3198
Q206	48E25660S01	2SA988
Q207	48E25659S01	2SC1841
Q208	48E23414S01	2SC3423
Q209	48E04071S01	2SC3421
Q210	48E04070S01	2SA1358
Q211	48E25835S01	FET, IRF540F
Q212	48E25834S01	FET, IRF9540F
Q213	48E25696S01	CP., 2SC2713BL
Q301	48E25625S01	2SC3327
Q302	48E25656S01	KTA1266
Q303	48E25656S01	KTA1266
Q304	48E23418S01	FET, 2SK389GR
Q305	48E25657S01	KTC3198
Q306	48E25660S01	2SA988
Q307	48E25659S01	2SC1841
Q308	48E23414S01	2SC3423
Q309	48E04071S01	2SC3421
Q310	48E04070S01	2SA1358
Q311	48E25835S01	FET, IRF540F
Q312	48E25834S01	FET, IRF9540F
Q313	48E25696S01	CP., 2SC2713BL
Q401	48E25625S01	2SC3327
Q402	48E25656S01	KTA1266
Q403	48E25656S01	KTA1266
Q404	48E23418S01	FET, 2SK389GR
Q405	48E25657S01	KTC3198
Q406	48E25660S01	2SA988
Q407	48E25659S01	2SC1841
Q408	48E23414S01	2SC3423
Q409	48E04071S01	2SC3421
Q410	48E04070S01	2SA1358
Q411	48E25835S01	FET, IRF540F
Q412	48E25834S01	FET, IRF9540F
Q413	48E25696S01	CP., 2SC2713BL
Q501	48E25658S01	2SA1015
Q502	48E25661S01	KRC101M
Q503	48E25656S01	KTA1266
Q504	48E25663S01	KRA104M
Q505	48E25662S01	KRC104M
Q506	48E25657S01	KTC3198
Q507	48E25657S01	KTC3198
Q508	48E25656S01	KTA1266
Q509	48E25657S01	KTC3198
Q510	48E25656S01	KTA1266
Q511	48E25657S01	KTC3198
Q512	48E25656S01	KTA1266
Q515	48E25211S01	FET, MTAJ30N06E
Q516	48E25211S01	FET, MTAJ30N06E
Q517	48E25211S01	FET, MTAJ30N06E
Q518	48E25211S01	FET, MTAJ30N06E
Q519	48E04071S01	2SC3421
Q520	48E04070S01	2SA1358
Q521	48E04071S01	2SC3421
Q522	48E04070S01	2SA1358
Q523	48E25211S01	FET, MTAJ30N06E
Q524	48E25211S01	FET, MTAJ30N06E
Q525	48E25211S01	FET, MTAJ30N06E

Symbol No.	Part No.	Description
Q526	48E25211S01	FET, MTAJ30N06E
Q527	48E04071S01	2SC3421
Q528	48E04070S01	2SA1358
Q529	48E04071S01	2SC3421
Q530	48E04070S01	2SA1358

Diodes

D101	48E25648S01	1SS133
D103	48E25648S01	1SS133
D201	48E25648S01	1SS133
D203	48E25648S01	1SS133
D301	48E25648S01	1SS133
D303	48E25648S01	1SS133
D401	48E25648S01	1SS133
D403	48E25648S01	1SS133
D501	48E25654S01	1A3-J
D502	48E25654S01	1A3-J
D503	48E25648S01	1SS133
D504	48E25648S01	1SS133
D505	48E25648S01	1SS133
D506	48E25654S01	1A3-J
D507	48E25654S01	1A3-J
D508	48E25648S01	1SS133
D509	48E09190S01	F10P20F
D510	48E09190S02	F10P20FR
D511	48E25655S01	11EFS2
D512	48E25655S01	11EFS2
D513	48E25655S01	11EFS2
D514	48E25655S01	11EFS2
D515	48E09190S01	F10P20F
D516	48E09190S02	F10P20FR
D517	48E25655S01	11EFS2
D518	48E25655S01	11EFS2
D519	48E25655S01	11EFS2
D520	48E25655S01	11EFS2
D521	48E25829S01	1SS184
ZD501	48E25653S01	Zener, MTZJ6.8C
ZD502	48E25652S01	Zener, MTZJ22B
ZD503	48E25651S01	Zener, MTZJ16B
ZD504	48E25651S01	Zener, MTZJ16B
ZD505	48E25652S01	Zener, MTZJ22B
ZD506	48E25823S01	Zener, MTZJ15A
ZD507	48E25823S01	Zener, MTZJ15A
ZD508	48E25652S01	Zener, MTZJ22B
ZD509	48E25651S01	Zener, MTZJ16B
ZD510	48E25651S01	Zener, MTZJ16B
ZD511	48E25652S01	Zener, MTZJ22B
ZD512	48E25823S01	Zener, MTZJ15A
ZD513	48E25823S01	Zener, MTZJ15A
ZD514	48E25652S01	Zener, MTZJ22B

Coils

L501	24E25699S01	Choke
L502	24E25699S01	Choke
L503	24E25698S01	38µH
L504	24E25698S01	38µH
L505	24E25669S01	10µH
L506	24E25669S01	10µH
L507	24E25698S01	38µH
L508	24E25698S01	38µH
L509	24E25669S01	10µH
L510	24E25669S01	10µH

Thermistors

TH501	48E11405S01	20K ohm
TH502	48E11405S01	20K ohm

Transformers

T501	25E25831S01	DC/DC
T502	25E25831S01	DC/DC

Capacitors

E109	23E25762S01	ELY., 22µF / 50V
E110	23E25762S01	ELY., 22µF / 50V
E111	23E25638S01	ELY., 220µF / 10V
E112	23E25762S01	ELY., 22µF / 50V
C115	08E25814S01	CP., 220pF
C116	08E25688S01	CP., 1000pF
C117	08E25690S01	CP., 47pF
C118	08E25631S01	POLY., 0.01µF
C119	08E25694S01	CP., 10pF
C120	08E25695S01	CP., 68pF
C121	08E25695S01	CP., 68pF
C122	08E25633S01	POLY., 0.047µF
E209	23E25762S01	ELY., 22µF / 50V
E210	23E25762S01	ELY., 22µF / 50V
E211	23E25638S01	ELY., 220µF / 10V
E212	23E25762S01	ELY., 22µF / 50V
C215	08E25814S01	CP., 220pF

Symbol No.	Part No.	Description
C216	08E25688S01	CP., 1000pF
C217	08E25690S01	CP., 47pF
C218	08E25631S01	POLY., 0.01μF
C219	08E25694S01	CP., 10pF
C220	08E25695S01	CP., 68pF
C221	08E25695S01	CP., 68pF
C222	08E25633S01	POLY., 0.047μF
E309	23E25762S01	ELY., 22μF / 50V
E310	23E25762S01	ELY., 22μF / 50V
E311	23E25638S01	ELY., 220μF / 10V
E312	23E25762S01	ELY., 22μF / 50V
C315	08E25814S01	CP., 220pF
C316	08E25688S01	CP., 1000pF
C317	08E25690S01	CP., 47pF
C318	08E25631S01	POLY., 0.01μF
C319	08E25694S01	CP., 10pF
C320	08E25695S01	CP., 68pF
C321	08E25695S01	CP., 68pF
C322	08E25633S01	POLY., 0.047μF
E409	23E25762S01	ELY., 22μF / 50V
E410	23E25762S01	ELY., 22μF / 50V
E411	23E25638S01	ELY., 220μF / 10V
E412	23E25762S01	ELY., 22μF / 50V
C415	08E25814S01	CP., 220pF
C416	08E25688S01	CP., 1000pF
C417	08E25690S01	CP., 47pF
C418	08E25631S01	POLY., 0.01μF
C419	08E25694S01	CP., 10pF
C420	08E25695S01	CP., 68pF
C421	08E25695S01	CP., 68pF
C422	08E25633S01	POLY., 0.047μF
C501	08E25828S01	CP., 180pF
E501	23E25644S01	ELY., 3.3μF / 50V
C502	08E25637S01	POLY., 0.15μF
E502	23E25639S01	ELY., 10μF / 16V
C503	08E25782S01	CP., 1000pF
E503	23E25639S01	ELY., 10μF / 16V
C504	08E25631S01	POLY., 0.01μF
E504	23E25639S01	ELY., 10μF / 16V
C505	08E25688S01	CP., 1000pF
C506	08E25815S01	CP., 0.01μF
E506	23E25639S01	ELY., 10μF / 16V
C507	08E25636S01	POLY., 0.1μF
E507	23E25643S01	ELY., 220μF / 16V
C508	08E25626S01	POLY., 1500pF
E508	23E25638S01	ELY., 220μF / 10V
C509	08E25630S01	POLY., 6800pF
E509	23E25639S01	ELY., 10μF / 16V
C510	08E25630S01	POLY., 6800pF

Symbol No.	Part No.	Description
E510	23E25642S01	ELY., 100μF / 16V
C511	08E25633S01	POLY., 0.047μF
E511	23E25832S01	ELY., 2200μF / 16V
C512	08E25633S01	POLY., 0.047μF
E512	23E25832S01	ELY., 2200μF / 16V
E513	23E25830S01	ELY., 470μF / 50V
E514	23E25830S01	ELY., 470μF / 50V
C515	08E25633S01	POLY., 0.047μF
E515	23T95403W05	ELY., 5600μF / 40V
C516	08E25633S01	POLY., 0.047μF
E516	23T95403W05	ELY., 5600μF / 40V
C517	08E25634S01	POLY., 0.056μF
E517	23E25762S01	ELY., 22μF / 50V
C518	08E25634S01	POLY., 0.056μF
E518	23E25762S01	ELY., 22μF / 50V
C519	08E25636S01	POLY., 0.1μF
E519	23E25643S01	ELY., 220μF / 16V
C520	08E25636S01	POLY., 0.1μF
E520	23E25643S01	ELY., 220μF / 16V
C521	08E25630S01	POLY., 6800pF
C522	08E25630S01	POLY., 6800pF
C523	08E25633S01	POLY., 0.047μF
E523	23E25697S01	ELY., 330μF / 50V
C524	08E25633S01	POLY., 0.047μF
E524	23E25697S01	ELY., 330μF / 50V
E525	23E25762S01	ELY., 22μF / 50V
E526	23E25762S01	ELY., 22μF / 50V
C527	08E25633S01	POLY., 0.047μF
E527	23E25697S01	ELY., 330μF / 50V
C528	08E25633S01	POLY., 0.047μF
E528	23E25697S01	ELY., 330μF / 50V
C529	08E25634S01	POLY., 0.056μF
E529	23E25832S01	ELY., 2200μF / 16V
C530	08E25634S01	POLY., 0.056μF
E530	23E25832S01	ELY., 2200μF / 16V
C531	08E25688S01	CP., 1000pF
E531	23E25830S01	ELY., 470μF / 50V
C532	08E25815S01	CP., 0.01μF
E532	23E25830S01	ELY., 470μF / 50V
C533	08E25636S01	POLY., 0.1μF
E533	23T95403W05	ELY., 5600μF / 40V
C534	08E25637S01	POLY., 0.15μF
E534	23T95403W05	ELY., 5600μF / 40V
E535	23E25762S01	ELY., 22μF / 50V
E536	23E25762S01	ELY., 22μF / 50V
E537	23E25643S01	ELY., 220μF / 16V
E538	23E25643S01	ELY., 220μF / 16V
E541	23E25697S01	ELY., 330μF / 50V
E542	23E25697S01	ELY., 330μF / 50V

Symbol No.	Part No.	Description
E543	23E25762S01	ELY., 22μF / 50V
E544	23E25762S01	ELY., 22μF / 50V
E545	23E25697S01	ELY., 330μF / 50V
E546	23E25697S01	ELY., 330μF / 50V
E547	23E25639S01	ELY., 10μF / 16V
E548	23E25642S01	ELY., 100μF / 16V
C599	23E25769S01	ELY., (B.P) 100μF / 10V
C601	08E25636S01	POLY., 0.1μF
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R155	06E25826S01	1.2K ohm
R156	17E09460S01	Cement, 0.1 ohm 5WX2
R157	06E25672S01	680 ohm
R158	06E25677S01	10K ohm
R159	06E25679S01	12K ohm
R160	06E25666S01	M.F., 10 ohm 1W
R255	06E25826S01	1.2K ohm
R256	17E09460S01	Cement, 0.1 ohm 5WX2
R257	06E25672S01	680 ohm
R258	06E25677S01	10K ohm
R259	06E25679S01	12K ohm
R260	06E25666S01	M.F., 10 ohm 1W
R355	06E25826S01	1.2K ohm
R356	17E09460S01	Cement, 0.1 ohm 5WX2
R357	06E25672S01	680 ohm
R358	06E25677S01	10K ohm
R359	06E25679S01	12K ohm
R360	06E25666S01	M.F., 10 ohm 1W
R455	06E25826S01	1.2K ohm
R456	17E09460S01	Cement, 0.1 ohm 5WX2
R457	06E25672S01	680 ohm
R458	06E25677S01	10K ohm
R459	06E25679S01	12K ohm
R460	06E25666S01	M.F., 10 ohm 1W
R508	06E25679S01	12K ohm
R509	06E25684S01	100K ohm
R510	06E25675S01	4.7K ohm
R511	06E25684S01	100K ohm
R512	06E25806S01	2K ohm
R513	06E25684S01	100K ohm
R514	06E25806S01	2K ohm
R515	06E25825S01	1M ohm
R516	06E25810S01	680K ohm
R517	06E25673S01	1K ohm
R518	06E25673S01	1K ohm
R519	06E25673S01	1K ohm
R520	06E25673S01	1K ohm

Symbol No.	Part No.	Description
R521	06E25807S01	3.3K ohm
R522	06E25824S01	470 ohm
R523	06E25676S01	5.6K ohm
R524	06E25681S01	20K ohm
R525	06E25681S01	20K ohm
R526	06E25827S01	220 ohm
R527	06E25827S01	220 ohm
R528	06E25677S01	10K ohm
R529	06E25677S01	10K ohm
R530	06E25964S01	220K ohm
R531	06E25685S01	240K ohm
R532	06E25671S01	510 ohm
R534	06E25675S01	4.7K ohm
R536	06E25688S01	11K ohm
R537	06E25674S01	2.4K ohm
R538	06E25684S01	100K ohm
R539	06E25683S01	62K ohm
R540	06E25677S01	10K ohm
R541	06E25680S01	18K ohm
R542	06E25667S01	M.F., 110 ohm 1W
R543	06E25667S01	M.F., 110 ohm 1W
R556	06E25666S01	M.F., 10 ohm 1W
R557	06E25666S01	M.F., 10 ohm 1W
R564	06E25675S01	4.7K ohm
R565	06E25671S01	510 ohm
R566	06E25688S01	11K ohm
R567	06E25674S01	2.4K ohm
R568	06E25684S01	100K ohm
R569	06E25683S01	62K ohm
R570	06E25667S01	M.F., 110 ohm 1W
R571	06E25667S01	M.F., 110 ohm 1W
R580	06E25666S01	M.F., 10 ohm 1W
R581	06E25666S01	M.F., 10 ohm 1W
R586	06E25668S01	M.F., 150 ohm 1W
VR104	18E25664S01	Variable, 1.5K ohm
VR204	18E25664S01	Variable, 1.5K ohm
VR304	18E25664S01	Variable, 1.5K ohm
VR404	18E25664S01	Variable, 1.5K ohm
VR501	18E25665S01	Variable, 10K ohm
VR502	18E25665S01	Variable, 10K ohm

PRE P.C.Board

IC's

IC101	51E03808S01	μPC4570HA
IC102	51E03808S01	μPC4570HA

Symbol No.	Part No.	Description
IC103	51E03808S01	µPC4570HA
IC104	51E03808S01	µPC4570HA
IC105	51E03808S01	µPC4570HA
IC106	51E03808S01	µPC4570HA
IC107	51E03808S01	µPC4570HA
IC301	51E03808S01	µPC4570HA
IC302	51E03808S01	µPC4570HA
IC303	51E03808S01	µPC4570HA
IC304	51E03808S01	µPC4570HA
IC305	51E03808S01	µPC4570HA
IC306	51E03808S01	µPC4570HA

Switches

S101	40E09137S01	Slide, SSSF12 (4-2) (INPUT LEVEL · NOM/4V)
S102	40E22009S01	Slide, SSSF12 (2-3) (INPUT CHANNEL)
S103	40E09464S01	Slide, SSSF12 (2-2) (HP · OFF/ON)
S104	40E09137S01	Slide, SSSF12 (4-2) (LP · X1/X20)
S105	40E09464S01	Slide, SSSF12 (2-2) (LP · OFF/ON)
S106	40E22009S01	Slide, SSSF12 (2-3) (INPUT MODE)
S301	40E09137S01	Slide, SSSF12 (4-2) (HP · X1/X20)
S302	40E09464S01	Slide, SSSF12 (2-2) (HP · OFF/ON)
S303	40E09464S01	Slide, SSSF12 (2-2) (LP · OFF/ON)
S304	40E22009S01	Slide, SSSF12 (2-3) (INPUT MODE)

Capacitors

C101	08E25623S01	CER.,	10pF
E101	23E25645S01	ELY.,	10µF / 50V
C102	08E25623S01	CER.,	10pF
E102	23E25640S01	ELY.,	22µF / 16V
C103	08E25836S01	CER.,	33pF
E103	23E25640S01	ELY.,	22µF / 16V
C104	08E25623S01	CER.,	10pF
E104	23E25640S01	ELY.,	22µF / 16V
C105	08E25635S01	POLY.,	0.082µF
E105	23E25640S01	ELY.,	22µF / 16V
C106	08E25635S01	POLY.,	0.082µF
E106	23E25641S01	ELY.,	47µF / 16V
C107	08E25623S01	CER.,	10pF
E107	23E25640S01	ELY.,	22µF / 16V
C108	08E25628S01	POLY.,	3900pF
E108	23E25645S01	ELY.,	10µF / 50V
C109	08E25635S01	POLY.,	0.082µF
C110	08E25632S01	POLY.,	0.039µF
C111	08E25627S01	POLY.,	2200pF
C112	08E25837S01	CER.,	100pF
C113	08E25623S01	CER.,	10pF
C114	08E25623S01	CER.,	10pF
C201	08E25623S01	CER.,	10pF
E201	23E25645S01	ELY.,	10µF / 50V
C202	08E25623S01	CER.,	10pF
E202	23E25640S01	ELY.,	22µF / 16V
C203	08E25836S01	CER.,	33pF
E203	23E25640S01	ELY.,	22µF / 16V
C204	08E25623S01	CER.,	10pF
E204	23E25640S01	ELY.,	22µF / 16V
E205	23E25640S01	ELY.,	22µF / 16V
C205	08E25635S01	POLY.,	0.082µF
C206	08E25635S01	POLY.,	0.082µF
E206	23E25641S01	ELY.,	47µF / 16V
C207	08E25623S01	CER.,	10pF
E207	23E25640S01	ELY.,	22µF / 16V
C208	08E25628S01	POLY.,	3900pF
E208	23E25645S01	ELY.,	10µF / 50V
C209	08E25635S01	POLY.,	0.082µF
C210	08E25632S01	POLY.,	0.039µF
C211	08E25627S01	POLY.,	2200pF
C212	08E25623S01	CER.,	10pF
C214	08E25623S01	CER.,	10pF
C301	08E25623S01	CER.,	10pF
E301	23E25645S01	ELY.,	10µF / 50V
C302	08E25623S01	CER.,	10pF
E302	23E25640S01	ELY.,	22µF / 16V
C303	08E25836S01	CER.,	33pF
E303	23E25640S01	ELY.,	22µF / 16V
C304	08E25623S01	CER.,	10pF
E304	23E25640S01	ELY.,	22µF / 16V
C305	08E25628S01	POLY.,	3900pF
E305	23E25640S01	ELY.,	22µF / 16V
C306	08E25635S01	POLY.,	0.082µF
E306	23E25641S01	ELY.,	47µF / 16V
C307	08E25628S01	POLY.,	3900pF
E307	23E25640S01	ELY.,	22µF / 16V
C308	08E25635S01	POLY.,	0.082µF
C309	08E25623S01	CER.,	10pF
C310	08E25635S01	POLY.,	0.082µF
C311	08E25632S01	POLY.,	0.039µF
C312	08E25837S01	CER.,	100pF
C313	08E25623S01	CER.,	10pF
C401	08E25623S01	CER.,	10pF
E401	23E25645S01	ELY.,	10µF / 50V
C402	08E25623S01	CER.,	10pF
E402	23E25640S01	ELY.,	22µF / 16V
C403	08E25836S01	CER.,	33pF
E403	23E25640S01	ELY.,	22µF / 16V

Symbol No.	Part No.	Description
C404	08E25623S01	CER., 10pF
E404	23E25640S01	ELY., 22µF / 16V
C405	08E25628S01	POLY., 3900pF
E405	23E25640S01	ELY., 22µF / 16V
C406	08E25635S01	POLY., 0.082µF
E406	23E25641S01	ELY., 47µF / 16V
C407	08E25628S01	POLY., 3900pF
E407	23E25640S01	ELY., 22µF / 16V
C408	08E25635S01	POLY., 0.082µF
C409	08E25623S01	CER., 10pF
C410	08E25635S01	POLY., 0.082µF
C411	08E25632S01	POLY., 0.039µF
C412	08E25623S01	CER., 10pF
C513	08E25634S01	POLY., 0.056µF
C525	08E25634S01	POLY., 0.056µF
E549	23E25645S01	ELY., 10µF / 50V
E550	23E25645S01	ELY., 10µF / 50V
E551	23E25645S01	ELY., 10µF / 50V
E552	23E25645S01	ELY., 10µF / 50V

Volume (1) P.C.Board

Resistors

VR101	18E25743S01	Volume, 50K ohmX2 (GAIN)
VR102	18E25761S01	Volume, 50K ohmX2/20K ohmX2 (HP)
VR103	18E25746S01	Volume, 50K ohmX4 (LP)

Volume (2) P.C.Board

Resistors

VR301	18E25743S01	Volume, 50K ohmX2 (GAIN)
VR302	18E25761S01	Volume, 50K ohmX2/20K ohmX2 (HP)
VR303	18E25746S01	Volume, 50K ohmX4 (LP)

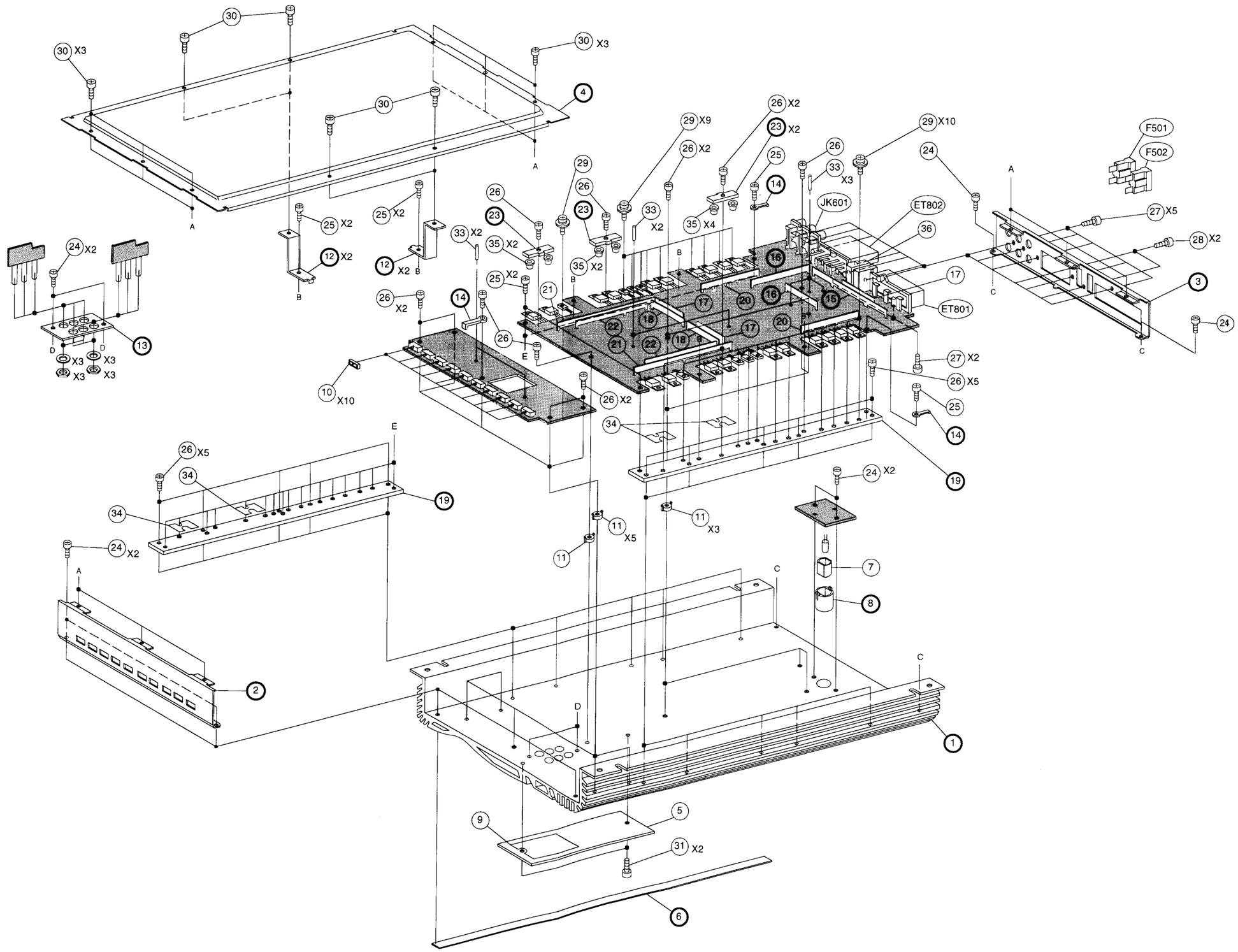
LED P.C.Board

LED

LD501	48E23780S01	SEL2510C (GRN)

Symbol No.	Part No.	Description
Miscellaneous		
ET801	01E22007S01	POWER SUPPLY Terminal
ET802	09E25704S01	SPEAKER OUTPUT Terminal
F501	65E25833S01	Fuse, Auto 25A (For Battery Line)
F502	65E25833S01	Fuse, Auto 25A (For Battery Line)
JK601	09E25484S01	RCA Connector (INPUT / PRE OUT)

Exploded View (Cabinet)



Cabinet Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.		Index	Part No.	Description
○	5	5-E	15E25610S01	Badge (A)
△	5	5-E	15E25611S01	Badge (B)
□	5	5-E	15E25610S01	Badge (A)
	7	4-F	15E25478S01	Cover, LED
	9	5-B	15E25613S01	Badge, Window
	10	3-C	15E21973S01	Cover, Switch
	11		43E21451S01	Support, P.C.Board
	17		45E25713S01	Bas Bar (Power Supply)
	18		45E26006S01	Bas Bar, L
	20	2-E	45E25617S01	Bas Bar, FET
	21		45E25821S01	Bas Bar, 308A
	22		45E25822S01	Bas Bar, 308B
	24		03E06492S02	Screw, Bind (M3X5)
	25		03E08429S02	Screw, Bind (M3X6)
	26		03E06967S01	Screw, Bind (M3X10)
	27		03E23371S01	Screw, Pan (M3X8)
	28	2-G	03E07902S01	Screw, Pan (M2X6)
	29		03E08304S01	Screw, W/Double Washer (M3X8.5)
	30		03E23802S01	Screw, Special (M3X5)
	31	5-E	03E25622S01	Screw, Hex. Socket (M2.6X10)
	33		09E21408S01	Lead Pin
	34		26E25705S01	Sheet, MICA
	35		43E25706S01	Bushing U
	36	2-F	43E23814S01	Holder, Fuse

Symbol No.	Index	Part No.	Description

NOTE ○: For MRV-F505 (North American) Model Only, △: For MRV-F505 (General Foreign) Model Only,
□: For MRV-F505 (Japanese) Model Only, Others : Common.